

power the life support system and science equipment. Scientists note that at full operating speed the flywheel rotor's linear velocity is two-and-one-half times the speed of sound (1,875 miles per hour). If the wheel itself were allowed to spin without meeting resistance, it would go on for more than 12 hours.

"The flywheel energy storage system represents a revolutionary step in energy storage technology," says Raymond Beach, NASA Glenn's team leader for flywheel development. He sees the flywheel as a potential long-term alternative for chemical batteries, which don't last as long and which generate waste. "The process is very efficient," he points out. "More than 85 percent of the energy put into the wheel comes out."

NASA believes that in the coming decades similar solar-powered generators could have applications on earth and on Mars. When the Mars Surveyor Lander mission reaches the Red Planet, two pilot Glenn projects—the Mars Array Technology Experiment (MATE) and the Dust Accumulation and Removal Technology (DART)—will explore the feasibility of producing oxygen propellant from the Martian atmosphere and will test whether power-generating solar cells can function amid extreme cold and notorious Martian dust storms. "Because of the dust, the cold temperatures and the varying light spectrum, the best solar cell for our 'gas station on Mars' might be one that we wouldn't consider using in our space solar arrays," says NASA Glenn Project Manager Cosmo Baraona, who is overseeing the experiments.

Solar cells designed at Glenn have already performed better than expected with the Pathfinder and Sojourner Rover, but David Scheiman, a researcher at the Ohio Aerospace Institute in Cleveland, a partner of Glenn, says it is uncertain if those cells will work over the estimated five years it will take to get a human to and from Mars.

Through its Microgravity Science Division, Glenn is NASA's star performer with microgravity experiments involving combustion and fluid physics. Aside from its history with spacecraft and jet engines, Glenn has bolstered Cleveland's reputation as a hub for biomedicine. "We are fortunate to reside in a region with some of the best medical research institutions in the country and a growing biomedical industry base," says Campbell.

At the forefront are researchers like Rafat Ansari, a groundbreaking physicist. "My personal interest is with the human eye," he says. According to Ansari, our eyes are not only windows to the soul, but also windows to the human body, reflecting the health and function of vital chemical processes. They are also places where physicians can look to better understand the risks of exposure to radiation during deep space travel to destinations like Mars. "When light passes from the cornea into the retina, it also passes through nearly every tissue type found in the body," Ansari says. "By studying those tissues, we can look for evidence of certain conditions from one's cholesterol level to the formation of cataracts to the potential for Alzheimer's disease to diabetes."

Ansari began his career with NASA 13 years ago. His fascination with eyes started when his father developed cataracts. It led him to investigate the etiology of cataracts and the risks associated with certain diseases. Astronauts can be especially vulnerable because increased exposure to radiation associated with deep space travel may accelerate the growth of cataracts and macular degeneration.

Ansari and a team of Glenn researchers are working with the Federal Food and Drug Administration to develop a screening process for diabetes. Another project at the Glenn

laboratories involved development of an apparatus in partnership with the National Eye Institute, located at the National Institutes of Health in Bethesda, Md. It would have applications not only on Mars but also in rural parts of the world where there is a niche to fill with telemedicine. The patient or, in the case of space travel, the astronauts would wear a specially designed helmet with eye-examining goggles connected to special sensors monitoring the heart in real time. The apparatus could detect health abnormalities as explorers walk across the Martian surface. But long before the first human mission is sent to the fourth planet from the sun, Ansari would like to see such mobile devices used in remote locales on earth where medicine is unavailable.

In the years ahead, the facility bearing Senator Glenn's name promises to claim its own prominent place on the journey of human discovery. "This year, as we celebrate the Glenn center's 60th anniversary, all of us can look back in pride at our outstanding accomplishments that have helped propel NASA and U.S. industry to new horizons," adds Campbell. "And no matter where that next horizon is found, Glenn's pioneers and innovators will make it possible for us to travel beyond it. Ultimately, we want the public to benefit from what we do."

BOROUGH OF DURYEA CELEBRATES CENTENNIAL

HON. PAUL E. KANJORSKI

OF PENNSYLVANIA

IN THE HOUSE OF REPRESENTATIVES

Wednesday, March 21, 2001

Mr. KANJORSKI. Mr. Speaker, I rise today to pay tribute to the Borough of Duryea, Pennsylvania, which will celebrate its centennial on April 7 with a community parade and picnic held by the Duryea Centennial Committee.

Duryea was originally called Babylon because it was a veritable Babel of languages and nationalities due to the immigrants who came to work in the coal mines.

The community was also known as Marcy Township before assuming its present name. The township was formed from territory taken from Pittston, Ransom and Old Forge townships on January 19, 1880. It was named for a pioneer, the first British settler in the region, Zebulon Marcy, who emigrated from Connecticut in the spring of 1770. A census taken at the formation of Marcy Township found 1,159 inhabitants, which had increased to 2,904 by 1890. According to the 2000 census, the population of Duryea is 4,634.

The present name of the community commemorates Abram Duryea of New York, who bought coal lands in the area in 1845 and opened mines around which the town grew up. He served in the Civil War as a colonel of the Fifth New York Infantry in May, 1861, and was brevetted major-general four years later for his gallant and meritorious services.

Prior to becoming a borough, Duryea was a post-office village within Marcy Township, situated two miles north of Pittston. Duryea was incorporated as a borough on April 6, 1901. The first set of ordinances was adopted by council and approved by the burgess, whose equivalent today is the mayor, on August 23, 1901.

In 1901, John A. Burlington was the burgess, Gary M. Gray was president of the council and Charles D. Evans was borough secretary.

At that time, a Methodist church and a Catholic church were already established in the borough. The community was rich in mining and agriculture. Within the borough, there were new coal breakers, along with a rapid rise in the real estate market. The community already had postal, telegraph and telephone communication, as well as the service of three leading railroads, the Lehigh Valley, the Erie and Wyoming Valley, and the Delaware, Lackawanna and Western.

Duryea was a thriving community, boasting one baker, two blacksmiths, three carpenters, three milliners, one drugstore, two dry goods stores, two general stores, one gentleman's furnishings store, three grocery stores, a hat and cap store, four hotels, an iron fence manufactory, a meat market, a drill moving factory, two livery stables, three physicians and one undertaker.

Today, the majority of the borough is occupied by single-family residences. Some of these are company houses that were once owned by the coal companies. While there were only 400 homeowners in Duryea in 1901, today there are 2,089.

The borough is also still home to commercial enterprises, with two small businesses and three manufacturing plants, including Schott Glass Technologies, which makes products used in some of the greatest scientific ventures of our time. For example, laser glasses from the Duryea plant are helping scientists seek cleaner, cheaper sources of energy.

Present-day Duryea, led by Mayor Mark Rostkowski, is also home to six churches and six cemeteries, one parochial school, a little-league baseball field, a field for junior football and a playground.

Mr. Speaker, I am pleased to call to the attention of the House of Representatives the centennial of the Borough of Duryea, and I wish its residents well as they begin a new century for their community.

CELEBRATING NAT GEIER ON HIS 90TH BIRTHDAY

HON. PETER DEUTSCH

OF FLORIDA

IN THE HOUSE OF REPRESENTATIVES

Wednesday, March 21, 2001

Mr. DEUTSCH. Mr. Speaker, I rise to honor Mr. Nat Geier, a distinguished citizen of Sunrise, Florida who has devoted himself to improving his community over the last three decades. Through numerous citizen campaigns, Mr. Geier has been the engine of improvement in strengthening the Broward County community. This week, Nat Geier will turn ninety years old—it is an occasion which Broward County residents will celebrate with pride.

Born in Poland in 1911, Mr. Geier immigrated to America at the age of nine. He dropped out of the New York City School system at age 13 to get a job in the garment business cutting material. This young drop-out learned quickly, worked hard, and rose up in the ranks, eventually earning enough to relocate and buy a condominium in Florida. An early resident of the now well-developed areas of South Florida, Mr. Geier has always understood that homeownership is the anchor of all communities because it gives residents long-